Environmental Progress Report

Doing the right work

Open and accountable government

# What is the Environmental Progress Report?

- Saying what DEP knows and doesn't know about environmental condition
- Changing DEP's work to focus on what the data says are the most important problems
- Being accountable for results

How is the Environmental Progress Report different from what we do now?

How environmental protection got started

Statutes were passed to protect the environment and public health.

A process was created to implement the law, most commonly:

Set standards → Write permits → Monitor compliance → Enforce against violators
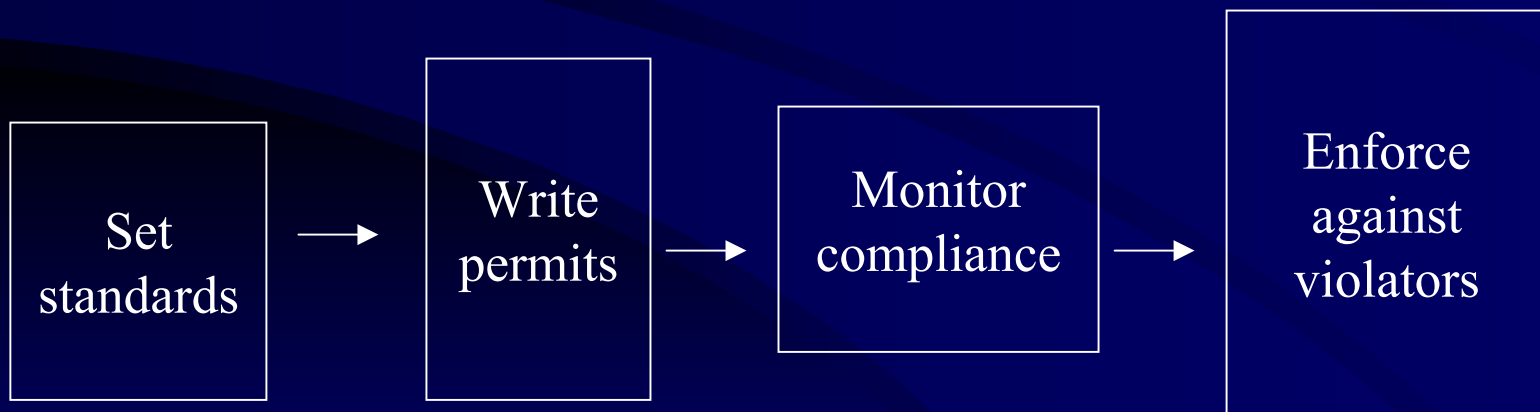
Over time

- We built data systems and budgets to track the permits, inspections and enforcement.

- We measured success primarily by our activities: did we do them on time, consistent with the rules and in sufficient numbers?

| Set standards | → | Write permits | → | Monitor compliance | → | Enforce against violators |
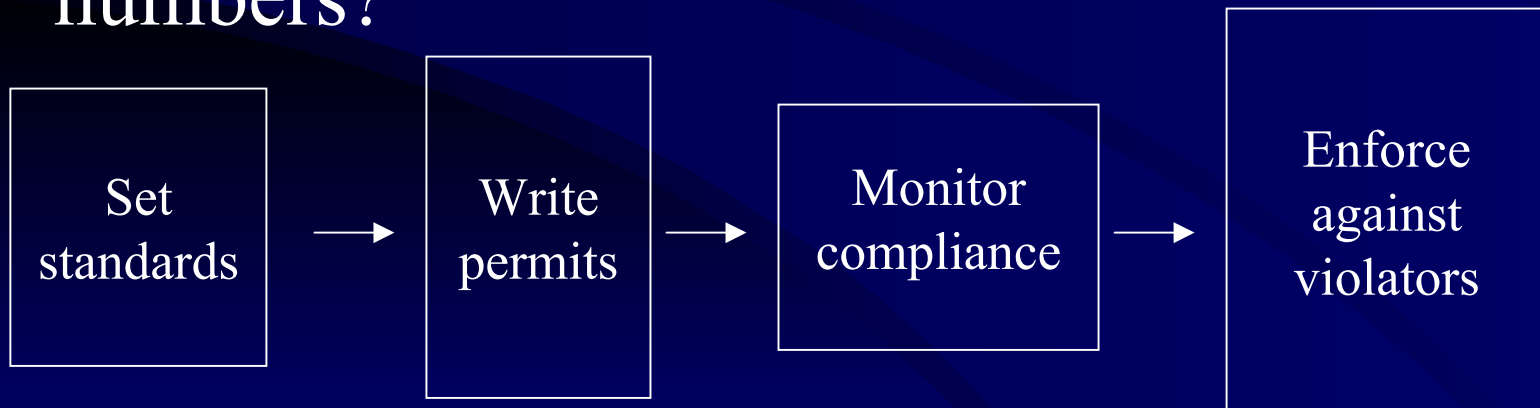
The traditional system

has addressed some big problems:

- Better sewage treatment
- Improved drinking water treatment

But…

Does this approach result in protection of human health and the environment?

- ☐ Yes
- ☐ Sometimes
- ☐ Who knows?

Results unclear

- Activities are counted
- Results in the world mostly are not

We know about the individual actions we take, but not always if those are the right actions to solve problems, or if they improved the condition of the environment overall.

Good intentions

- The traditional system was designed to protect the environment.
- So we presume that if the system is followed, the activities (permits, inspections, enforcement) will lead to environmental benefits, because that's what it was designed to do.

What's not included?

- Activities not required to have a permit are not part of the system, so are not addressed.
- Activities required to have a permit but that never apply for one are easily overlooked.
- Permitted facilities bear most of the burden.

Inherent problem

- The traditional system is based on assumptions about the causes of environmental problems, at the time the rules are written.

- So, some important causes are left out

  (e.g., nonpoint sources, agriculture, land use patterns, dams, air deposition)

  and the system cannot easily adapt to new data or problems.

Getting back to basics

Here's what people want to know:

- Are the waters of our rivers, lakes and ponds clean?
- Is the drinking water safe?
- Are valued habitats protected?

Taking a different approach

Instead of making assumptions and building a process around them -

Start from the environmental result

- Assess environmental condition to determine what the problems and causes really are.
- Take action to address them.
- Check to see if it worked.
- Change actions if needed.
- Repeat.

The essence

- Decide on the results we want first, then select work to achieve them.

  (If you don't have a destination, any route will do.)

- Work toward outcomes, not outputs.

  (Running faster is not better if you are not going in the right direction.)

So what?

How might government's work change if we start with results instead of activities?

Some examples

Example: Low flow rivers

- Some rivers in MA experience very low flows most summers, damaging ecosystems and putting water supplies in jeopardy.

- How should this problem be addressed?

A. Downstream view, 8-26-98

USGS IPSWICH RIVER

B. Downstream view, 6-17-99

6/17/1999 14:07

Ipswich River

Example: Low flow rivers

- Our regulatory authority is over withdrawals.

- The activity model looks to our regulatory authority and asks: how can we change/enforce our withdrawal permits to address this problem?

Example: Low flow rivers

If we start from the environmental data first, we see that withdrawals are only one of a number of contributing factors. Others include:

- Wastewater pumped out of basin
- Infiltration and inflow ("clean" water that leaks or is put into sewage pipes)
- Dams
- Increased impervious surface, reducing recharge and increasing stormwater runoff

Example: Low flow rivers

MA average daily withdrawals

- Withdrawals are just one of many contributing factors.
- And permitted withdrawals are a small portion of the total withdrawals; registered withdrawals face less strict review.

	Registered withdrawals	Permitted with drawals
■ Million gallons per day	1154	182
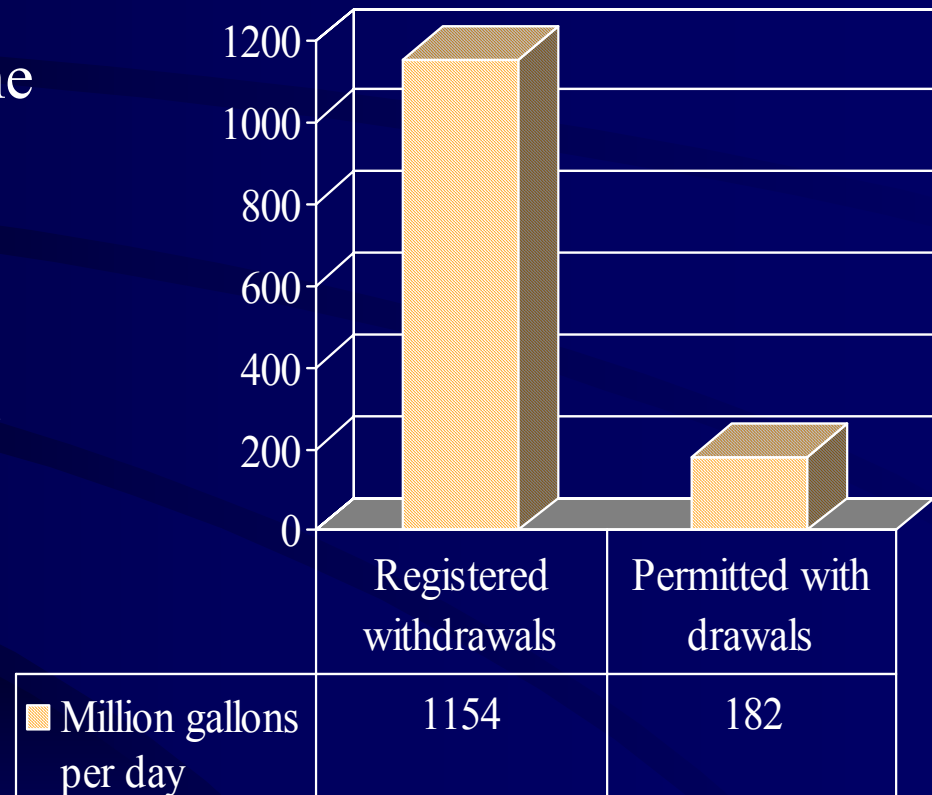
Example: Low flow rivers

- Traditional activities won't do it: tightening standards for permitted withdrawals, while important, will not fix the low flow river problem.

- Focus on results leads to new work: solving the problem of low flow rivers requires us to address many things, including some that are not regulated.

Example: Wetlands loss

- When we collected data using aerial photography on the amount of wetlands filled in the state, we found more wetlands fill than expected.

- Research on the discovered fill indicates that over 50% of the fill in the state is not permitted.

Example: Wetlands loss

Previous percent time allocation - wetlands
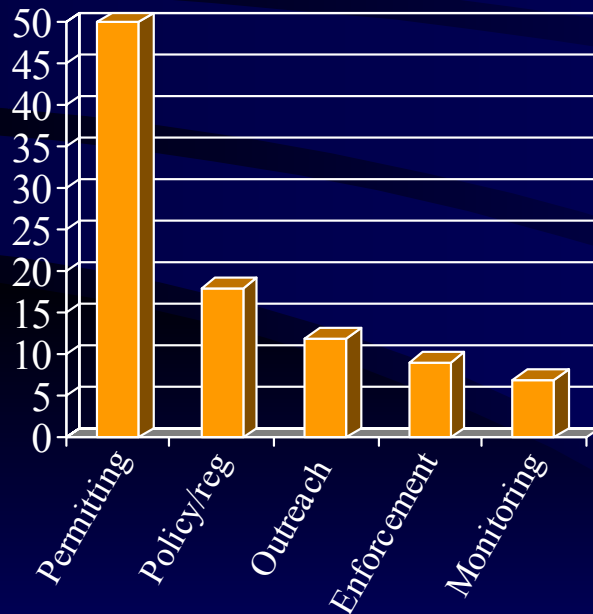
- Doing more or faster permitting won't solve the unpermitted fill problem
- If our goal is to protect wetlands, we need to spend a lot more time looking for and preventing illegal fills.

What makes results-driven work hard to do?

Lack of data on ambient condition; we don't know how we are doing in many places.

Percent of state waters assessed
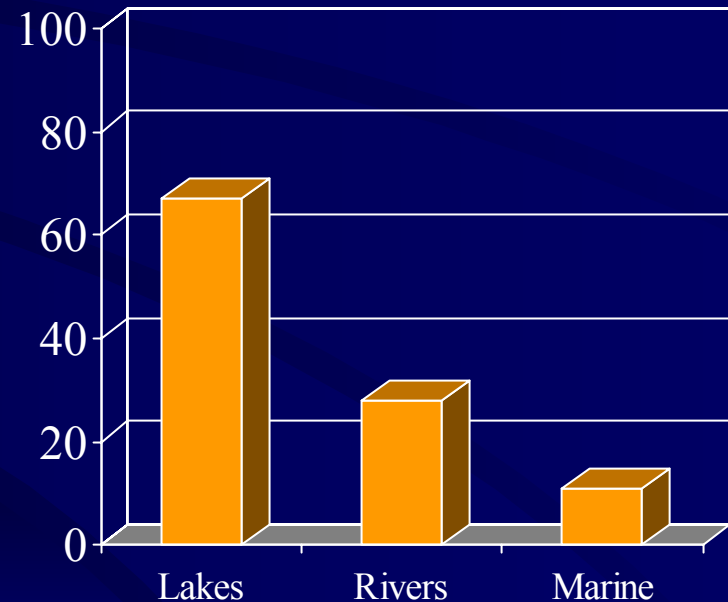
What makes results-driven work hard to do?

- Data systems have been constructed over the last 30 years to track activities.

- Data needed to solve problems (e.g., analyze causes, look for trends) often does not exist or is not easy to extract from established data systems.

What makes results-driven work hard to do?

- Collection of data on environmental condition is often separate from traditional activity accountability.

- Because they are in separate systems, the ambient data we do have is not always used to direct the activity work.

What makes results-driven work hard to do?

Activities are easier to measure

- We can count the individual enforcement actions we take.
- But it is harder to measure if we improved compliance across the board.

What makes results-driven work hard to do?

Activities are easier to control

- If activities are what matter, faster work allows us to say we are improving.

- If we are focusing on results, more is better only if we did thoughtful analysis and careful targeting of work and checked to see if it worked.

It's not the people, it's the system

The great majority of people working in environmental protection for state government are here because they believe in the mission.

And many get great environmental results against difficult odds.

We need to make it easier for them to do what they came here to do.

How are we making this shift?

Make results the goal.

Activities as a means to an end, not an end in themselves.

Make explicit the steps necessary to achieve the results and hold ourselves accountable for each step.

- Ambient data alone will not drive change in the systems work.

- Make clear both internally and externally what work is expected to lead to what results.

Create change from the outside in

- Use the web to disseminate understandable information.

- Tell the whole unvarnished truth.

- Create external pressure to overcome internal barriers.

Just do it

- Don't wait for perfect information

- Expect to make mistakes and to adjust

- Going public supports improvement

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Built around 3 areas

Drinking water

Surface and groundwater

Wetlands and waterways

For drinking water, the logical steps to get to the goal are stated:

Water that is safe to drink

- Set standards for safe drinking water at PWS

- Know if delivered water is meeting standards

- Assure compliance with drinking water standards

- Support private water supply safety

- Protect existing sources

- Identify and protect future sources of drinking water

Sufficient water for public health and safety

- Promote wise use of water

- Assure capacity to respond to emergencies

For surface and groundwater, the logical steps to get to the goal are stated:


Clean Water

- Set water quality standards

- Know conditions of surface and groundwater

- Prevent water quality degradation

- Control pollution from point sources

  - Surface water discharge permitting

  - Surface water discharge compliance

  - Groundwater discharge permitting

  - Groundwater discharge permit compliance

- Control pollution from nonpoint sources

- Restore degraded water quality

Sufficient water for healthy ecosystems

- Set protective flow targets

- Know stream flow targets

- Control water withdrawals

  - Permitting

  - Compliance

- Prevent stream flow degradation

- Restore impaired flows
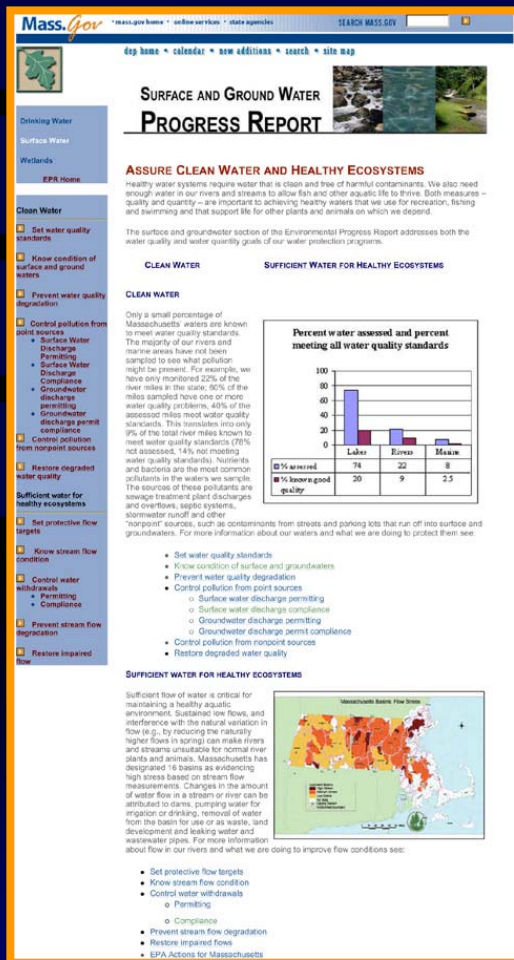
For wetlands, the logical steps to get to the goal are stated:
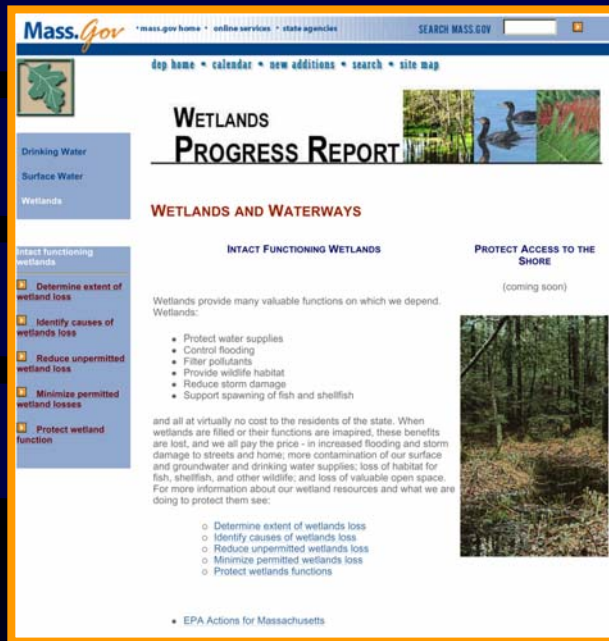
Intact functioning wetlands

- Determine extent of wetlands loss

- Identify causes of wetlands loss

- Reduce unpermitted wetlands loss

- Minimize permitted wetlands loss
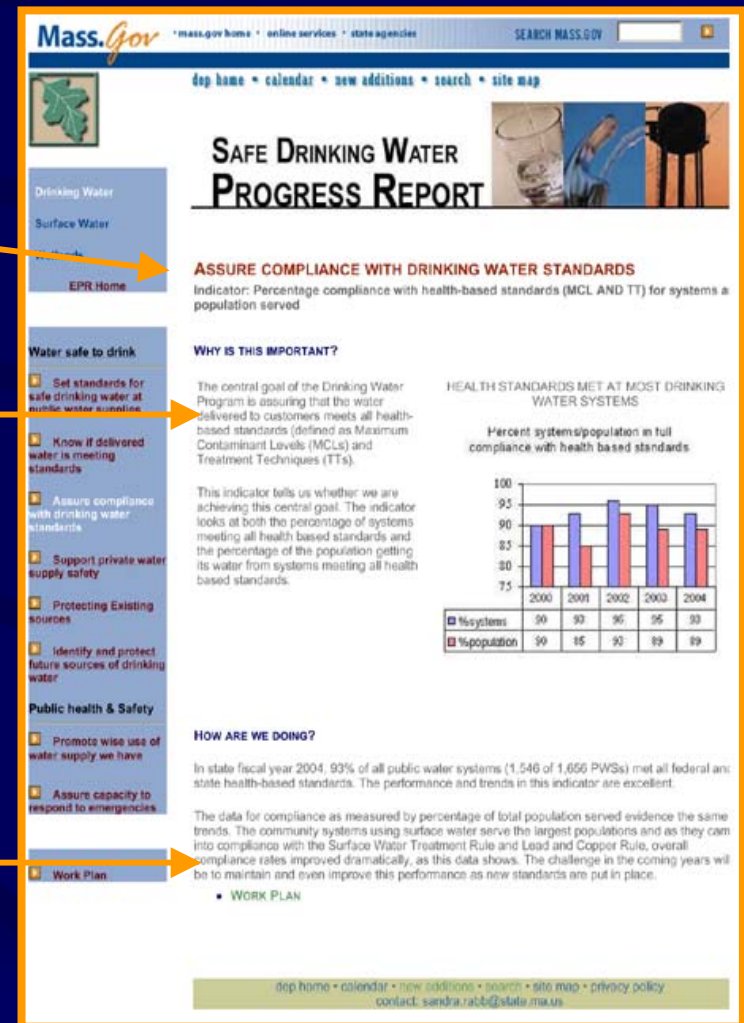
- Protect wetlands functions
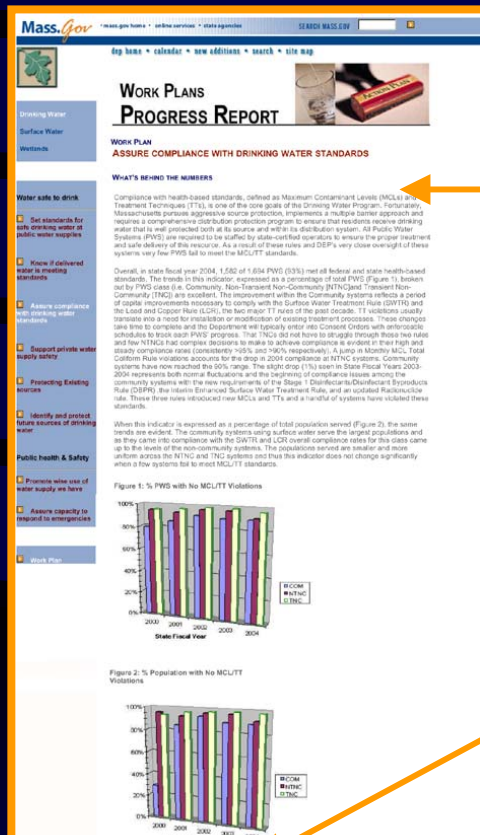
Protect access to the shore

- Coming soon

Each element of work has:

- An indicator of progress

- A short easy to understand paragraph on why this is important

- An explanation of how we are doing on the indicator

And each element has a work plan

- Taking you "behind the numbers" – analyzing the data to identify the most important causes

- Explaining what we are going to do to "maintain strong performance"

- Describing what we will do to "improve results."

Changing work to achieve results

Every water program has retargeted work to address the biggest problems: some more, some less.

We are just beginning, but we are making progress.

Taking a new look

Comprehensive retargeting is an enormous task - we can't make progress on everything at once. We are working on this timetable:

2002	2003	2004	2005	2006	2007	2008

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Wetlands

Water Management

Wastewater

Monitoring & assessment

Drinking water

Focus on ends drives innovations on means

If we are accountable for results more than activities, creativity can flourish.

- Price controls as a regulatory tool?
- Public exposure as a way to improve compliance?

Full transparency

- Encourages results-driven work

- And holds us accountable (it's your government)

We hope that people who use this site will

- Appreciate our "telling it like it is"
- Learn more about the condition of water in Massachusetts
- Challenge us to do better
- Take action to improve conditions in their own community

For the future

- Update information and work plans annually
- Expand the site to allow review of the indicators by watershed

  Be able to see not just what the problems are, but where

- Include problems on the horizon – e.g. emerging contaminants
- Get accountability for results as deeply entrenched as activity counting is now

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http://www.mass.gov/dep/brp/epp/epphome.htm